

**Environmental Influences on the Induction and Incidence of Asthma**  
**October 18-19, 2004**  
**Agenda**

**Monday October 18**

8:30: Introductions – MaryJane Selgrade  
(representatives from ORD, OCHP, NIEHS)

**Session 1 The Biology of Asthma**  
(Chairs David Peden and Hillel Koren)

9:00 - What is Asthma - Rob Lemanske, University of Wisconsin

9:30 - Public Health and Economic Impact -Kevin B Weiss, Midwest Ctr for Health Services &  
Policy Res., Chicago

10:00 - Break

10:30 - Susceptibility/genetics - Fernando Martinez, University of Arizona

11:00 - Ages and Stages - Scott Weiss, Harvard University

**11:30 - Lunch**

**Session 2 Allergens and Other Biologics**  
(Chairs: Darryl Zeldin and Dori Germolec)

12:45 – Allergens: Cockroach, dust mite, mold, and animal dander and the induction of asthma -  
Peyton Eggleston, Johns Hopkins University

1:15 - What makes a protein an allergen - Martin Chapman, University of Virginia

1:45 – Viruses and asthma- Giovanni Piedimonte, University of Miami

2:15 - Endotoxin and role of LPS in asthma - Harald Renz, University of Marburg, Germany

2:45 - Break

**Session 3 Ambient Air Pollutants**  
(Chairs: Ian Gilmour and Pat Mastin)

3:00 - Environmental Tobacco Smoke - Marietta Jaakkola, University of Birmingham, UK.

3:30 - Ambient Air pollutants contributing to induction of asthma - Stephanie London, National  
Institute of Environmental Health Sciences

4:00 - Role pro-oxidative DEP chemicals in airway inflammation – Andre Nel, UCLA School of Medicine, LA.

4:15 Break

#### **Session 4 Anticipating the Future**

(Chair: David Chen)

4:30 – The potential impact of global warming and climate change on asthma – Christine Rogers, Harvard University

**5:15-7:15 - Sessions 5 Posters** (over drinks and appetizers)

### **Tues October 19**

#### **Session 6 Other Factors Potentially in Increased Asthma Incidence**

(Chairs: Andrew Geller and Kathy Sykes)

8:30 - In utero exposures: Peter Sly University of Western Australia (confirmed)

9:00 - Asthma in older adults - Paul Enright, University of Arizona

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9:30 - Break

9:45 - Occupational- David Weissman, National Insitute of Occupational Health and Safety

10:15 - Obesity/ - Stephanie Shore, Harvard University

#### **Session 7 Breakout Groups\***

(Chairs and rappateurs for the breakout groups will be identified prior to the meeting)

10:45 – Charge to breakout groups - MaryJane Selgrade

11:-1:30 - breakout groups meet and lunch (box lunches will be available to purchase)

#### **1:30-3:00 Session 8 Report out from Breakout groups**

(Chair: MaryJane Selgrade and Stephanie London)

**3:00 – Adjourn**

\*Participants will be divided into breakout sessions based on the following topics:

Ambient (outdoor) air pollutants  
Indoor air pollutants (biologics)  
Occupational exposures  
Early life stages (developmental)  
Older adults and the aged  
Intrinsic (genetic) susceptibility  
Lifestyle

Each breakout group will consider the two broad questions identified in the workshop purpose as they relate to the given topic area:

1) What does the science suggest that regulatory and public health agencies could do now to reduce the incidence of asthma, and 2) What research is needed to improve our understanding of the factors that contribute to the induction of asthma and improve our ability to manage this problem in the future and how should these needs be prioritized?

**Program Committee**

MaryJane Selgrade, EPA  
Ian Gilmour, EPA  
Hillel Koren, EPA  
David Chen, EPA  
Andrew Geller, EPA  
Kathy Sykes, EPA  
David Peden, Univ. of NC  
Dori Germolec, NIEHS  
Stephanie London, NIEHS  
Pat Mastin, NIEHS  
Darryl Zeldin, NIEHS

**Sponsors:** U.S. Environmental Protection Agency  
Office of Research and Development  
Office of Children's Health  
National Institute of Environmental Health Sciences  
Others

**Venue:** U.S. EPA facility, Research Triangle Park, NC; block of rooms reserved at Courtyard by Marriott, 301 Residence Inn Boulevard, Durham, NC 27713, (919) 361-1266

**Objectives:** The incidence of asthma has increased dramatically over the last 25 years in the U.S. and other industrialized nations as a result of ill-defined changes in living conditions in modern western society. It has been suggested that exposure to air pollutants including environmental

tobacco smoke, ozone, and diesel exhaust may be contributing to this increased incidence. In addition, indoor exposures to allergens and other biologics have been implicated because more time is spent indoors and indoor environments have been made more air tight to improve energy efficiency. However, other factors including increased incidence of obesity, decreased exercise, change in diet, decreased exposure to microbes during early life, and increased viral respiratory infections (e.g. from day care facilities) are all possible contributors to the rise in asthma incidence. Although children appear to be the population most at risk, there is growing concern that new cases are also arising in adults. **The purpose of this workshop is to review the current scientific evidence with respect to factors that may contribute to the induction and therefore increased incidence of asthma and to address two broad questions: 1) What does the science suggest that regulatory and public health agencies could do now to reduce the incidence of asthma, and 2) What research is needed to improve our understanding of the factors that contribute to the induction of asthma and improve our ability to manage this problem in the future?**